REMARKS

Introduction

Claims 1 - 12 were originally pending in the PCT application to which this application claims priority. On September 20, 2000, in a paper submitted to the International Preliminary Examining Authority at the European Patent Office, claim 11 was cancelled. Also, claim 12 was canceled by way of a Preliminary Amendment filed April 3, 2001. Claim 13 was added by way of Preliminary Amendment filed July 2, 2004, and Claim 14 was added by way of an Amendment filed November 23, 2004.

Claim Rejections

Claims 1 – 5, 7 – 10, and 13 – 14 have been rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 3,899,800 to Wittwer et al. in view of U.S. Patent No. 4,337,547 to Hancou. Also, claim 6 has been rejected under 35 U.S.C. § 103 as being unpatentable over the Wittwer et al. '800 patent in view of the Hancou '547 patent in further view of U.S. Patent No. 3,192,551 to Appel. Furthermore, claims 1 – 10 and 13 – 14 have been rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,485,650 to Swanepoel in view of the Wittwer et al. '800 patent. Applicant has amended claims 1 – 10, 13 and 14 to more particularly describe the invention. Applicant respectfully traverses these rejections for reasons set forth below.

The Prior Art

The Wittwer et al. '800 Patent

The Wittwer et al. '800 patent discloses a conventional "tournament style" windshield wiper blade assembly 10 having a superstructure 12. The superstructure 12 is adapted to be connected to

the end of a windshield wiper arm, and the windshield wiper arm applies pressure to the wiper blade assembly 10. (Col. 2, ll. 35 – 37). The superstructure 12 also includes claws 30, 31, 32, 33 that are connected to wiper blade element 14. The wiper blade element 14 includes a wiping member 34 and a backing strip 36. (Col. 2, ll. 45 – 47). However, the Wittwer et al. '800 patent does ***not*** disclose a ***beam blade*** windscreen wiper that includes an ***elongate curved backbone*** which is made of a ***single, unitary, resiliently flexible beam*** as set forth in each of claims 1, 2, 13, and 14 of the present application.

The Hancou '547 Patent

The Hancou '547 patent discloses a windshield wiper assembly including a harness 1 with an elongated piece 2 equipped with claws 3 so as to grasp substantially one half of a wiper blade rubber 4. Opposite to the elongated piece 2, the harness 1 includes a yoke 6 with claws 6′ used for carrying the second part of the blade rubber 4. (Col. 2, ll. 12 – 19). However, the Hancou '547 patent does ***not*** disclose or suggest a ***beam blade*** windscreen wiper that includes an ***elongate curved backbone*** which is made of a ***single, unitary, resiliently flexible beam*** or a force applying member which is ***connected to the backbone*** at two spaced apart points as set forth in each of claims 1, 2, 13, and 14 of the present application.

The Appel '551 Patent

The Appel '551 patent discloses a beam blade windshield wiper with a spring backbone element 36 and an attached rubber blade 37. The spring backbone 36 can be attached to an actuating arm. (Col. 3, ll. 63 – 75; Col. 4, ll. 1 – 3). However, the Appel '551 patent does ***not*** disclose or suggest a force applying member which is connected to the backbone at two spaced apart points ***with***

the spacing distance S between the points being between S = 0.1L and S = 0.35L as set forth in claim 1. The Appel '551 patent also does ***not*** disclose or suggest a force applying member which is connected to the backbone at two spaced apart points ***with the ratio R between 0.1 and 0.35*** as set forth in claim 2. Furthermore, the Appel '551 patent does ***not*** disclose or suggest a force applying member which is connected to the backbone at two spaced apart points ***with the spacing distance S between the points being between S = 0.15L and S = 0.35L*** as set forth in claim 13. Still further, the Appel '551 patent does ***not*** disclose or suggest a force applying member which is connected to the backbone at two spaced apart points ***with the spacing distance S between the points being between S = 0.1L and S = 0.35L***, wherein at one of the points, the force applying member is connected to the backbone ***by means of a pin which is received in a longitudinal slot in the backbone*** so that relative longitudinal and pivotal movement between the pin and the backbone is permitted as set forth in claim 14.

The Swanepoel '650 Patent

The Swanepoel '650 patent discloses a beam blade windshield wiper with a spring backbone 12 and an attached rubber wiper blade 14. The backbone 12 has a centrally located connector 16 for releasably connecting the wiper 10 to a spring loaded wiper arm. (Col. 3, ll. 1 – 3). However, the Swanepoel '650 patent does ***not*** disclose or suggest a force applying member which is connected to the backbone at ***two spaced apart points*** as set forth in each of claims 1, 2, 13, and 14.

The Windscreen Wiper Assembly of the Present Invention

In contrast to the related art, the present invention as defined in amended independent claim 1 is directed toward a ***beam blade*** windscreen wiper having an elongate, curved backbone made out of

a single, unitary, resiliently flexible beam. A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between 0.1*L and 0.35*L, where L is the total length of the backbone, and both S and L are expressed in millimeters. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of S allows the windscreen wiper of the present invention to achieve improved pressure distribution across the length of the wiper.

In another aspect, the present invention as defined in amended independent claim 2 is directed toward a ***beam blade*** windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. A force applying member is connected to the backbone at two spaced apart points. A ratio, R, of the spacing distance, S, to the total length of the backbone, L, falls within a range between 0.1 and 0.35, where S and L are expressed in the same unit of measure. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of R allows the windscreen wiper of the present invention to achieve improved pressure distribution across the length of the wiper.

In still another aspect, the present invention as defined in amended independent claim 13 is directed toward a ***beam blade*** windscreen wiper having an elongate, curved backbone made out of a resiliently flexible material. A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between 0.15*L and 0.35*L, where L is the total length of the backbone, and both S and L are expressed in millimeters. The curved shape of the backbone, the resiliently flexible material of the backbone, and the disclosed range of S allows the windscreen wiper of the present invention to achieve improved pressure distribution across the length of the wiper.

In still another aspect, the present invention as defined in amended independent claim 14 is directed toward a ***beam blade*** windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam. A force applying member is connected to the backbone at two spaced apart points. Spacing distance, S, between the points falls within a range between 0.15*L and 0.35*L, where L is the total length of the backbone, and both S and L are expressed in millimeters. At one of the points, the force applying member is connected to the backbone by means of a pin which is received in a longitudinal slot in the backbone so that relative longitudinal and pivotal movement between the pin and the backbone is permitted.

Argument

No Motivation to Combine Teachings of References

A rejection based on 35 U.S.C. § 103 must rest on a factual basis, with the facts being interpreted without a hindsight reconstruction of the invention from the prior art. Thus, in the context of an analysis under § 103, it is not sufficient merely to identify one reference that teaches several of the limitations of a claim and another that teaches several limitations of a claim to support a rejection based on obviousness. This is because obviousness is not established by combining the basic disclosures of the prior art to produce the claimed invention absent a teaching or suggestion that the combination be made. Interconnect Planning Corp. v. Fiel, 774 F.2d 1132, 1143, 227 U.S.P.Q. (BNA) 543, 551 (Fed. Cir. 1985); In Re Corkhill, 771 F.2d 1496, 1501-02, 226 U.S.P.Q. (BNA) 1005, 1009-10 (Fed. Cir. 1985). The relevant analysis invokes a cornerstone principle of patent law:

> That all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is . . . simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements. Environmental Designs v. Union

> Oil Co. of Cal., 713 F.2d 693, 698 (Fed. Cir. 1983) (other citations omitted).
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> A patentable invention . . . may result even if the inventor has, in effect, merely combined features, old in the art, for their known purpose without producing anything beyond the results inherent in their use. American Hoist & Derek Co. v. Sowa & Sons, Inc., 220 U.S.P.Q. (BNA) 763, 771 (Fed. Cir. 1984) (emphasis in original, other citations omitted).

As the Court of Appeals for the Federal Circuit recently noted, "[w]hen a rejection depends upon a combination of prior art references, there must be some teaching, suggestion, or motivation to combine the references." Ecolochem, Inc. v. Southern Calif. Edison, 56 U.S.P.Q. 2d 1065, 1073 (Fed. Cir. 2000). There must be a rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. In re Dembiczak, 175 F.3d 994, 999 (Fed. Cir. 1999). This is because "combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability." Id. Accordingly, to establish a rejection under 35 U.S.C. § 103, a person of ordinary skill in the art must not only have had some motivation to combine the prior art teachings, but also some motivation to combine the prior art teachings in the particular manner claimed. See, e.g., In re Kotzab, 217 F.3d 1365, 1371 (Fed. Cir. 2000). In other words, the Examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. In re Rouffet, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

Here, in support of the rejection of claims 1 – 5, 7 – 10 and 13 – 14 under 35 U.S.C. § 103 over the Wittwer et al. '800 patent in view of the Hancou '547 patent, the Examiner states that it

"would have been obvious...to modify Wittwer's invention with the curved backbone as taught by Hancou to ensure a pre-stress when the blade is pressed upon the surface to be wiped." However, the Examiner fails to identify where, specifically, this motivation is provided. Rather, Applicant respectfully submits that the Examiner is engaging in impermissible hindsight and is taking the claimed invention as a blueprint for piecing together the prior art in support of the rejection under 35 U.S.C. § 103. Applicant respectfully submits that there is simply no motivation provided in the Wittwer et al. '800 patent or Hancou '547 patent to combine any of their teachings. Accordingly, Applicant respectfully submits that this rejection based on 35 U.S.C. § 103 is improper.

In support of the rejection of claim 6 on the basis of the Wittwer et al. '800 patent in view of the Hancou '547 patent and further in view of the Appel '551 patent, the Examiner states that it "would have been obvious to modify the invention of Wittwer in view of Hancou to have a backbone that varies in width and thickness as taught by Appel to provide substantially uniform pressure along the length of contact between the flexible rubber wiping blade and the windshield." The Examiner continues by stating "it would accommodate a correspondingly smaller radius of curvature while retaining appropriate width for resisting lateral drag loads without undue distortion." Applicant respectfully submits that the Examiner is again engaging in impermissible hindsight and is taking the claimed invention as a blueprint for piecing together the prior art in support of the rejection under 35 U.S.C. § 103. Applicant respectfully submits that there is simply no motivation provided in the Wittwer et al. '800, Hancou '547, or Appel '551 patents to combine any of their teachings. Accordingly, Applicant respectfully submits that this rejection based on 35 U.S.C. § 103 is improper.

Furthermore, in support of the rejection of Claims 1 – 10 and 13 – 14 under 35 U.S.C. § 103 over the Swanepoel '650 patent in view of the Wittwer '800 patent, the Examiner states that:

> It would have been obvious at the time the invention was made to modify Swanepoel to use the connector as taught by Wittwer so that

> the wiper arm will have equally distributed pressure along the blade so that as the blade is brought against the surface of the windshield, the pressure will conform the wiping lip of the wiping member (34) to the curvature of the surface of the windshield and since the pressure points are equally spaced, more pressure will be exerted in the central portion of the blade to hold the central portion of the blade against the surface of the windshield thereby preventing the blade from lifting from the windshield under forces created by a strong wind current across the windshield.

Applicant respectfully submits that the Examiner is again engaging in impermissible hindsight and is taking the claimed invention as a blueprint for piecing together the prior art in support of the rejection under 35 U.S.C. § 103. Applicant respectfully submits that there is simply no motivation provided in the Swanepoel '650 or Wittwer et al. '800 patents to combine any of their teachings. Accordingly, Applicant respectfully submits that this rejection based on 35 U.S.C. § 103 is improper.

Cited Art Does Not Disclose or Suggest Claimed Spacing of Attachment Points

The Examiner relies on the Wittwer et al. '800 patent for its teaching of a superstructure 12 attached at four points to the backing strip 36, wherein the spacing between two of the points is within the range claimed in claims 1, 2, 13, and 14. However, the Wittwer et al. '800 patent discloses a mounting method for a ***tournament style*** windscreen wiper assembly. In contrast, the windscreen wiper disclosed in amended claims 1, 2, 13, and 14 of the patent application is a ***beam blade*** windscreen wiper. The importance of the distinguishing feature of the beam blade type windscreen wiper assembly as opposed to the tournament style wiper assembly cannot be overemphasized in this case. In the windshield wiper art, the term "beam" is used with respect to the structure which serves to force a wiper blade transversely onto the windshield. This is consistent with the definition of the word "beam" given by McGraw-Hill's Dictionary of Scientific and Technical Terms (fifth edition): "a body, with one dimension large compared with the other

dimension, whose function is to carry lateral loads (perpendicular to the large dimension) and bending movements."

Here, the Examiner seems to suggest that the backing strip 36 of the Wittwer et al. '800 patent constitutes the backbone made of a single, unitary, resiliently flexible beam claimed in each of claims 1, 2, 13, and 14. However, because the Wittwer et al. '800 patent discloses a traditional mounting method for a tournament style windscreen wiper assembly, and because the backing strip 36 does not independently force a wiper blade transversely onto the windshield, Applicant respectfully submits that a person having ordinary skill in the art would not recognize the traditional backing strip 36 as being a backbone made of a single, unitary, resiliently flexible beam. Thus, Applicant respectfully submits that the Wittwer et al. '800 patent fails to disclose or suggest a ***beam blade*** windscreen wiper that includes an ***elongate curved backbone*** which is made of a ***single, unitary, resiliently flexible beam*** as claimed in each of claims 1, 2, 13, and 14 of the present application.

Accordingly, even if the teachings of the cited references could be properly combined, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam, and a force applying member connected to the backbone at two spaced apart points, wherein the spacing distance, S, between the points falls within a range between 0.1*L and 0.35*L, wherein L is the total length of the backbone, and wherein both S and L are expressed in millimeters as set forth in independent claim 1.

Likewise, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam, and a force applying member connected to the backbone at two spaced

apart points, wherein a ratio, R, of the spacing distance, S, to the total length of the backbone, L, falls within a range between 0.1 and 0.35, wherein S and L are expressed in the same unit of measure as set forth in claim 2.

Further, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreen wiper having an elongate, curved backbone made out of a resiliently flexible material, and a force applying member connected to the backbone at two spaced apart points, wherein the spacing distance, S, between the points falls within a range between 0.15*L and 0.35*L, wherein L is the total length of the backbone, and both S and L are expressed in millimeters as set forth in claim 13.

Still further, none of the references, either standing alone or in combination, teach or suggest a beam blade windscreen wiper having an elongate, curved backbone made out of a single, unitary, resiliently flexible beam, and a force applying member connected to the backbone at two spaced apart points, wherein the spacing distance, S, between the points falls within a range between 0.15*L and 0.35*L, wherein L is the total length of the backbone, wherein both S and L are expressed in millimeters, and wherein at one of the points, the force applying member is connected to the backbone by means of a pin which is received in a longitudinal slot in the backbone so that relative longitudinal and pivotal movement between the pin and the backbone is permitted as set forth in claim 14.

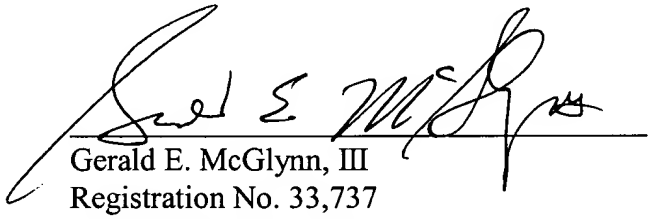
Therefore, it is respectfully submitted that independent claims 1, 2, 13, and 14 are allowable over the rejection under 35 U.S.C. § 103. Claims 3 – 10 are each ultimately dependent upon claims 1 or 2 and add perfecting limitations. Accordingly, Applicant respectfully submits that claims 3 – 10 are also allowable over the rejection under 35 U.S.C. § 103.

Conclusion

Independent claims 1, 2, 13 and 14 each recite structure that is not disclosed or suggested by the prior art and are patentably distinguishable from the subject matter of the references discussed above. Claims 3 – 10 are all ultimately dependent upon either independent claim 1 or 2, respectively and add further perfecting limitations. Applicant respectfully submits that the prior art references, alone or in combination, do not disclose or suggest the present invention. However, and even if they did, they could only be applied through hindsight after restructuring the disclosures of the prior art in view of the applicant's invention. Accordingly, Applicant respectfully solicits the allowance of the claims pending in this case.

If the Examiner has any questions or would like to discuss any of the matters set forth above, the Examiner is encouraged to contact undersigned counsel at the telephone number indicated below.

Respectfully submitted,



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